

1064-35-47

Hans G Othmer* (othmer@math.umn.edu), School of Mathematics, 270A Vincent Hall,
University of Minnesota 206 Church St SE, Minneapolis, MN 55449. *Robustness of Pattern
Formation in Development.*

Pattern formation during development of an adult organism requires precise spatio-temporal control of gene expression, which involves complex signal transduction and control networks. Spatio-temporal signaling is often described by systems of reaction-diffusion equations, and in this talk we will address the question of robustness of such complex systems under various disturbances, and in particular, analyze mechanisms for scale-invariant pattern formation. (Received August 21, 2010)